

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of the claims in the application:

1. (Original) A device for measuring the aerobic capacity of a subject, the device comprising input means for receiving a measurement of distance travelled by a user in a given time, said time being sufficiently large to ensure that the user is working at the maximum of his or her aerobic capacity, a processor for determining from said values of distance and time an aerobic capacity, and output means for outputting a measure of exercise level to the user based on the calculated aerobic capacity, wherein the aerobic capacity conforms to the relationship expressed as:

$$\text{VO2max} = a + bx + c(x^2)$$

wherein VO2max is the maximal oxygen consumption of a user,

wherein a, b and c are non-zero constants, and

wherein x is a measure of distance per unit time.

2. (Currently Amended) TheA device according to claim 1, wherein VO2max is expressed in millilitres of oxygen per kg bodyweight of the user per minute, x is a measure of the speed expressed as the distance run in miles in a time period of 12 minutes, and the constants a, b and c are in the following ranges:

$$2.2 \leq a \leq 3.4$$

$$20 \leq b \leq 27$$

$$2.0 \leq c \leq 2.9$$

3. (Currently Amended) TheA device as claimed in claim 2, wherein the constants a, b and c are in the following ranges:

$2.4 \leq a \leq 3.2$

$22 \leq b \leq 25$

$2.2 \leq c \leq 2.7$

4. (Currently Amended) TheA device as claimed in claim 3, wherein the constants a, b and c are in the following ranges:

$2.7 \leq a \leq 2.9$

$23 \leq b \leq 24$

$2.4 \leq c \leq 2.5$

5. (Currently Amended) TheA device as claimed in claim 4, wherein a is approximately 2.8, b is approximately 23.44 and c is approximately 2.46.

6. (Currently Amended) TheA device as claimed in any preceding claim, wherein the processor is also capable of calculating, from the previously determined aerobic capacity of the user, a speed target or target range equivalent to a proportion of the user's aerobic capacity, and dynamically outputting the current speed with an indication of the proximity of the current speed to the target speed or target speed range.

7. (Previously Presented) A method of measuring the aerobic capacity of a subject, comprising the steps of:

receiving a measurement of distance travelled by a user in a given time, said time being sufficiently large to ensure that the user is working at the maximum of his or her aerobic capacity,

determining from said values of distance and time an aerobic capacity, and

outputting a measure of exercise level to the user based on the calculated aerobic capacity,

wherein the aerobic capacity conforms to the relationship expressed as:

$$\text{VO2max} = a + bx + c(x^2)$$

wherein VO2max is the maximal oxygen consumption of a user,
wherein a, b and c are non-zero constants, and
wherein x is a measure of distance per unit time.

8. (Previously Presented) A computer program product comprising instructions which when executed in a computing device are effective to cause the computing device to measure an exercise level of a user by carrying out the steps of:

receiving a measurement of distance travelled by a user in a given time, said time being sufficiently large to ensure that the user is working at the maximum of his or her aerobic capacity,

determining from said values of distance and time an aerobic capacity, and

outputting a measure of exercise level to the user based on the calculated aerobic capacity,

wherein the aerobic capacity conforms to the relationship expressed as:

$$\text{VO2max} = a + bx + c(x^2)$$

wherein VO2max is the maximal oxygen consumption of a user,
wherein a, b and c are non-zero constants, and
wherein x is a measure of distance per unit time.

9. (Currently Amended) TheA computer program product as claimed in claim 8, when provided as a piece of software installed on a mobile telecommunications device, a piece of software for download to a mobile telecommunications device, an electronic circuit encoding the aforesaid instructions, an electrical signal encoding the aforesaid instructions, or a magnetic, optical or other physical program carrier.

10. (Currently Amended) A system for measuring an exercise level of a user, the system comprising a global positioning system (GPS) module for measuring a geographical location of a user or a speed of a user, and a mobile telecommunications device having an active communication link, in use, with the GPS module, the mobile telecommunications device being updated regularly with the position of or speed of the GPS module, and the mobile telecommunications device being provided with computer program means for calculating, from said position or speed, an exercise level of the user in terms of aerobic capacity, wherein the aerobic capacity conforms to the relationship expressed as:

$$\text{VO2max} = a + bx + c(x^2)$$

wherein VO2max is the maximal oxygen consumption of a user,
wherein a, b and c are non-zero constants, and
wherein x is a measure of distance per unit time.

11. (Currently Amended) TheA system as claimed in claim 10, further comprising a remote monitoring computer in communication with the telecommunications device, said computer being adapted to receive and process exercise data received from said telecommunications device over a mobile telecommunications network accessed by the telecommunications device.

12. (Currently Amended) TheA system as claimed in claim 10 or 11, wherein the GPS module is integral to the telecommunications device.

13. (Currently Amended) TheA system as claimed in claim 10 or 11, wherein the GPS module is provided as an accessory for the telecommunications device.

14. (Currently Amended) TheA system as claimed in claim 10 or 11, wherein the GPS module is a separate GPS unit sharing a compatible communications link with the telecommunications device.

15. (Currently Amended) A method of measuring an exercise level of a user, the method comprising the steps of:

measuring a geographical location of a user or a speed of a user using a global positioning system (GPS) module,

regularly updating a mobile telecommunications device with the position of or speed of the GPS module,

calculating, from said position or speed, an exercise level of the user in terms of aerobic capacity, wherein the aerobic capacity conforms to the relationship expressed as:

$$\text{VO2max} = a + bx + c(x^2)$$

wherein VO2max is the maximal oxygen consumption of a user,

wherein a, b and c are non-zero constants, and

wherein x is a measure of distance per unit time.

16. (Currently Amended) A computer program product comprising instructions which when executed in a computing device are effective to cause the computing device to measure an exercise level of a user by carrying out the steps of:

receiving data indicative of the speed or position of a user using a global positioning system (GPS) module,

calculating, from said position or speed, an exercise level of the user in terms of aerobic capacity, wherein the aerobic capacity conforms to the relationship expressed as:

$$\text{VO2max} = a + bx + c(x^2)$$

wherein VO2max is the maximal oxygen consumption of a user,

wherein a, b and c are non-zero constants, and

wherein x is a measure of distance per unit time.